



# ENERGY STAR® Buildings & Green Lights® Update



## Spotlight on *Retail*

ENERGY STAR® Buildings and Green Lights® retail partners have made tremendous strides in becoming more energy efficient, and we can thank them for making the environment a better, cleaner place for all of us. Whether it's your favorite restaurant, supermarket or department store, our retail partners are achieving impressive results with energy efficiency. In this issue of the *Update*, we spotlight a few retail partners that have done outstanding work in the partnership, both in accomplishing top-notch upgrades and in communicating their efforts.



## ENERGY STAR® Buildings: Keeping Retailers Out of the Red

Typically retail organizations across the United States have limited options available to them to increase their profits. Most often, a retailer has to increase its competitiveness by directly increasing the number of products sold. The ENERGY STAR Buildings® and Green Lights® Program offers retailers the more flexible solution of controlling their operating costs through energy-efficient technologies—allowing them to reduce their

Lights upgrades can bring additional benefits to retailers. Current lighting technologies can provide more accurate and attractive lighting designs for displays. Proper light levels and high color-rendering ensures customers can see products in optimal light, increasing their confidence in their purchases. Retail stores, including department stores, grocery stores, and discount stores can improve the quality and comfort of their buildings through ENERGY

and experience the program offers. This edition of the *Update* features several retail partners that have achieved a competitive edge as a result of participating in the ENERGY STAR Buildings and Green Lights Program.

Dayton Hudson  
Corporation  
(Minneapolis, MN)

### DOING THEIR SHARE

With today's sophisticated consumers encouraging corporate responsibility, retail partners in the ENERGY STAR Buildings and Green Lights Program are doing their share to improve the environment.

#### Pollution Prevention per Year :

CO <sub>2</sub> (lbs)	1,420,839,165
SO <sub>2</sub> (lbs)	8,627,543
NO <sub>x</sub> (lbs)	4,964,817

#### Dollars Saved per Year :

\$66,594,412

#### Square Footage Upgraded to Date:

458,355,548

energy costs by an average of 30 percent. Imagine how many more products would have to be sold to reach the same goal.

In addition to cost savings, ENERGY STAR Buildings and Green

prevents pollution as a result.

Using the ENERGY STAR Buildings proven energy-efficiency strategy allows retailers to focus on other pressing business needs while taking advantage of the guidance

DAYTON'S *Marshall Field's* HUDSON'S

Dayton Hudson Department Stores Division is rapidly upgrading its 14 million square feet to become more and more energy efficient. The company completed its Green Lights agreement in less than two years, and is well underway in applying the ENERGY STAR Buildings strategy to its facilities. Such dedication to energy-efficiency upgrades has not only brought Dayton Hudson impressive energy savings, but has also improved the company's workplace and sale environments.

Senior Energy Manager Tom Mecham sums up Dayton Hudson's attitude toward the upgrades, saying, "By doing these lighting upgrades, we not only saved energy

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The ENERGY STAR Buildings & Green Lights Update is a free quarterly publication with a circulation of more than 50,000. Recipients of the Update include: ENERGY STAR Buildings and Green Lights participants, program prospects, members of Congress, and interested members of the general public. **Receipt of this publication is not an indication that your organization is a participant.** To add your name to the subscription list, or to find out how to join ENERGY STAR Buildings or Green Lights, call the toll-free ENERGY STAR Hotline at 1-888-STAR-YES (1-888-782-7937).

Although publication of all submissions is not guaranteed, the Update encourages Partners, Allies, and Endorsers to submit articles of interest and to provide input for future issues. Please keep in mind that EPA seeks only to promote energy efficiency and does not endorse any particular product or service. If your organization would like to submit material for publication in the ENERGY STAR Buildings & Green Lights Update, please send materials to: Update Editor, 401 M Street, SW, (6202J), Washington, DC 20460; or fax to 202-565-2083.

## ON RETAIL

for a quick payback of our investment, we've also seen benefits from increased lighting levels and a better color rendering index." Throughout all its stores, the company replaced incandescent lamps and T12s with T8s and electronic ballasts. Reflectors and a single strip of T8s replaced a double row of fluorescent tubes and standard ballasts along the walls where merchandise is displayed. Now customers can better see what they are purchasing, while Dayton Hudson saves on energy bills.

Dayton Hudson is testing even more advanced technologies, such as light pipes for accent lighting and occupancy sensors attached to power strips at workstations, for additional savings opportunities. Variable frequency drives, roof-top improvements, and chiller upgrades are also planned. Employees have welcomed the changes made so far, especially when lighting quality and comfort improves. Dayton

Hudson is a prime example that energy efficiency can benefit everyone.

### Lowe's Companies, Inc. (North Wilkesboro, NC)

**LOWE'S** Lowe's Companies, Incorporated was a forerunner in applying energy efficiency technologies to its facilities. One of the first Partners to join Green Lights, Lowe's continues to incorporate the latest energy-efficiency technologies into its stores and warehouses today. With the assistance of Illumalex Corporation, an ENERGY STAR Buildings and Green Lights Ally, the home improvement chain is always on the alert for ways to save energy and minimize utility bills.

Lowe's installed full control energy management systems in its stores, which maximized the effi-

ciency of lighting, heating, cooling, and other energy uses. High-efficiency HVAC systems, metal halide lighting, and T8 fluorescent lamps are other state-of-the-art energy-efficiency technologies Lowe's uses to keep energy costs down.

### Mercantile Stores Company (Fairfield, OH)



For Mercantile Stores Company, ENERGY STAR Buildings and Green Lights is a "natural fit" to a company-wide goal of energy-efficiency, says Director of Real Estate Facilities Bruce Quisno. In addition to the significant energy cost savings of \$2,000 to \$3,000 per store, Mercantile Stores values the environmental benefits of energy efficiency. Joining ENERGY STAR Buildings and Green Lights not only

## VIEW

### **Department Store's Magazine Offers Customers Much More Than Sale Price Information**



ENERGY STAR Buildings participant Mervyn's California, part of the Dayton Hudson family of stores, wants its customers to know that energy efficiency and pollution prevention is incorporated into the way they do business. In addition to participating in annual community events like the annual 'Weekend of Giving', Mervyn's recently featured an ENERGY STAR article in their holiday issue of

VIEW Magazine. VIEW is a periodic publication that's distributed to more than 750,000 Mervyn's customers and available in their 273 stores in 14 states. "Reducing our environmental impacts is another way for us to contribute to the community," said K.C. Mares, Mervyn's Energy Manager. "We really want to show our customers that the environment is important to us."



## ***Wal-Mart and General Electric Lighting Team Up to Promote Energy Efficiency***

In April 1997, Wal-Mart and General Electric Lighting teamed up for an in-store educational campaign to promote ENERGY STAR and Green Lights. Booklets available in the lighting section of Wal-Mart stores educated customers about the environmental benefits of installing energy-efficient lighting for both consumers and businesses alike. One hundred 4" x 5" tearpads were distributed in 2,200 Wal-Mart stores nationally for a total of 220,000 possible impressions.

In addition to this in-store booklet distribution, Wal-Mart placed an energy-efficiency feature on its environmental section of its website, demonstrating a commitment to educating its customers about how saving energy not only saves money, but benefits the environment, as well.

made technical assistance and tools available, but also helped get out the word that retailers can help protect the environment through energy efficiency.

Mercantile Stores has revamped 75 to 80 of its stores with electronic ballasts and T8 fluorescent lamps, and installs the most recent energy-efficiency technologies in its new locations. Solar shading and use of natural light are some of the revolutionary applications Mercantile Stores is testing. In its Park Meadows Mall, Denver location, the company has added films and see-thru Mecho shades to windows to cut the amount of heat and light entering the building.

Quisno emphasizes that the benefits of energy efficiency are many. He sees three tiers of advantages from the new technologies: less energy use, cost savings, and an

increase in light levels and quality. And that makes everyone at Mercantile Stores happy. "It's just a win-win situation," says Quisno.

## **Shaw's Supermarkets (East Bridgewater, MA)**



Grocery shoppers in New England know that "good food costs less at Shaw's." What they might not know is that one of the reasons behind the supermarket chain's low prices is the company's sound management strategies, including their dedication to energy efficiency.

Shaw's is a long-time member of Green Lights and recently became an ENERGY STAR Buildings Partner as well. Energy and Regulatory Affairs Manager Kathy Loftus credits signif-

icant operating cost savings to energy-efficiency upgrades. About 75 percent of all stores have been either upgraded with the latest in energy-efficient lighting or were built to take advantage of the best technologies, such as T8 lamps, LED exit signs, energy management systems, and variable speed drives. Those stores that have been upgraded save between \$25,000 and \$30,000 a year in energy costs.

The environmental benefits of efficiency are also important to Shaw's Supermarkets. The company has been active in waste reduction, and views ENERGY STAR Buildings as an opportunity to save even more energy. Loftus sums up the company's attitude toward energy efficiency, saying, "Not only is this a smart business decision, it is the right thing to do. It helps keep everyone's costs down, and is good for the community and the environment."

## Target Stores (Minneapolis, MN)

**○ TARGET.** As one of the largest retailers in the country, Target Stores is the destination of many one-stop shoppers. Target, an ENERGY STAR Buildings Partner, is also on the mark when it comes to energy efficiency. Upgrades made so far will save the company an estimated 100 million kWh for 1997, amounting to millions of dollars in reduced energy costs each year.

Impressive as its upgrade savings are, what's even more remarkable is the rate of expansion for the variety chain, which expects to include more than 100 million square feet by the

year 2000. Energy efficiency is a key consideration in the construction of these new stores. Target's Fullerton, California store proved that much in 1996, when it won the ENERGY STAR Buildings Showcase Building award.

Target is not finished yet. After installing occupancy sensors in 723

stores in 1996, Target is experimenting with even more advanced energy-efficiency technologies. Skylights combined with daylight dimming controls will further cut lighting costs in the stock rooms, while roof and chiller upgrades will improve building comfort and reduce heating and cooling costs.

It's easy to see that Target is aiming to be a leader in energy efficiency and pollution prevention. ■



*Target Stores has taken its partnership beyond the installation of energy-efficiency technologies. Target is telling all of its customers about its participation in Green Lights through its shopping bags. Each Target bag proudly features the Green Lights logo.*

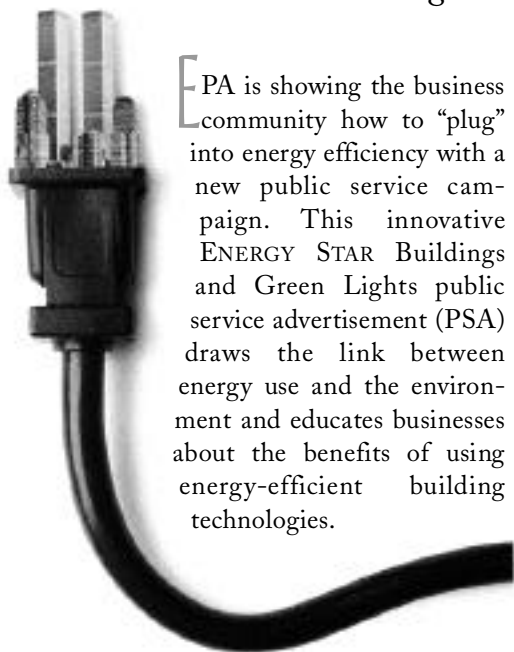
## ***A Loaf of Bread... A Container of Milk... And Some Pollution Prevention***

This fall, grocery retailer Safeway launched three in-store promotions to let their customers know about their commitment to energy efficiency. The first promotion, a Public Service Advertisement, ran in the western region coupon books. Over 15 million households received the coupon books in November. Along with the Green Lights and ENERGY STAR logo, the paper grocery bags in Safeway's western region stores were illustrated with several children's activities which focused on energy efficiency. Over 1.5 million bags were distributed throughout the west in November. In October, western region Safeway Brand juice, buttermilk, and chocolate milk cartons also carried the ENERGY STAR and Green Lights message in an innovative way.



## “Plugging” Into Energy Efficiency

*ENERGY STAR Buildings and Green Lights PSA educates about energy-efficient technologies*



EPA is showing the business community how to “plug” into energy efficiency with a new public service campaign. This innovative ENERGY STAR Buildings and Green Lights public service advertisement (PSA) draws the link between energy use and the environment and educates businesses about the benefits of using energy-efficient building technologies.

From September-December 1997, the ENERGY STAR Buildings and Green Lights PSA appeared 20 times in various national and regional business publications such as *Business Week*, *Corporate Report* (Minnesota) and newspapers like the *New York Times*. “This PSA is designed to raise the awareness that energy-efficiency is a good business strategy,” said Kate Lewis, Communications Manager for ENERGY STAR Buildings. The “Plug” PSA explains the environmental and economic accomplishments achieved by organizations who have joined EPA’s ENERGY STAR Buildings. Unlike

other more specialized recognition efforts, such as the Partner and Ally of the Year advertisement, the Plug PSA’s main goal is to inform the business community that ENERGY STAR Buildings is available as a solution to high energy costs.

Look for placements of this “Plug” PSA in the newspapers, trade journals, and business publications that you read regularly. Complimentary versions have been created for Allies and for trade publications read by members of the healthcare and education sectors. This PSA will appear in publications through the end of 1998. ■

## New Materials Help Small Business Partners Promote Themselves

EPA promotes the participation of its ENERGY STAR Small Business Partners, but now, small businesses can “do-it-yourself,” too, with the new Partner poster and decal. By displaying these attractive and brightly colored items for customers and employees to see, a Partner can quickly and easily be recognized for doing their part to reduce global climate change, and for being a smart business that doesn’t waste money on inefficiency.

The vibrant yellow background

and four-color art on the poster, and the bright yellow vinyl decal, were specifically designed to attract attention and convey the ENERGY STAR message. Also, small businesses that join the program are listed on the program website, where EPA provides a “hotlink” to those Partners who have their own websites.

Prior to Earth Day 1998, Partners’ hometown newspaper, radio station and Chamber of Commerce will all receive a letter recognizing the Partners’ commitment, and the achievements of those who have completed their efficiency upgrade.

Although no reporting is required, those Partners who choose to tell EPA a little about their upgrade using a simple prepaid postcard will be eligible

for national awards and for having their “success story” published on the website and in hard-copy. Allies and lenders should note that their small customers’ “success stories” will also credit Allies and others who helped the small firm successfully upgrade.

Current “success stories” are now available for viewing on the website, or Partners without Internet access can that request copies be sent by mail or fax.

If your firm is a small business, or if you are an Ally with small customers, or are a corporate Partner with small firms who are vendors, customers, or contractors, information about joining ENERGY STAR Small Business can be requested at the hotline at 1-888-STAR-YES. Small businesses can even read all about the program and sign up for all the benefits of partnership online at the website (<http://www.epa.gov/smallbiz>). ■



**SPO TLIGHT**

## Building Awareness for the ENERGY STAR Label

*Look for the ENERGY STAR PSA in your area*


ENERGY STAR is beginning to appear all over the United States as a result of the ENERGY STAR public awareness campaign. The goal of this campaign is to educate consumers about the link between energy waste and pollution, and to introduce the ENERGY STAR label as a means of identifying efficient, high-quality products. On January 8, 1998, Vice President Al Gore announced the newest ENERGY STAR labeling partnership—TVs and VCRs. ENERGY STAR labeled products include: clothes washers, dishwashers, refrigerators, air conditioners, central air conditioners, televisions, VCRs, water source heat pumps, geothermal heat pumps, boilers, thermostats, computers, copiers, faxes, monitors, printers, scanners, lamps, and lighting fixtures.

A major part of the awareness campaign is media and public service advertisement (PSA) coverage. The PSAs pictured below feature

ENERGY STAR labeled products, including a refrigerator, an air conditioner, and a computer, and has been distributed to more than 45 magazines and newspapers on both coasts. The majority of these publications have agreed to include the PSA in their publications, as space is available. To date, the print PSA has appeared in the *Los Angeles Business Journal* and *Los Angeles Magazine*. A broadcast version of the PSA has been distributed to over 140 TV

stations on both coasts and has aired more than 1,000 times in many cities around the United States.

A larger version of this PSA has been created for transit advertising, to be used on buses and in train and subway stations. During October 1997, the ENERGY STAR PSA was posted on the sides of buses in Hartford, Connecticut; Los Angeles, California; Milwaukee, Wisconsin; Pittsburgh, Pennsylvania; Portland, Oregon; and Seattle, Washington. By

the end of November, over 300 people saw the PSA in these cities. During December 1997 and January 1998, the PSA was posted on buses in Denver, Colorado; New York, New York; Philadelphia, Pennsylvania; and San Francisco, California, with more cities to come later in 1998. Watch for this great ad and remember to purchase ENERGY STAR products. 



*"Taking action against global warming  
is as easy as looking for the ENERGY STAR logo."*

— Vice President Al Gore

## TECH TALK

# Myths of Retail Lighting Upgrades

In the last issue of the *Update*, we explained some common myths about occupancy sensors. Continuing the series, this issue will address myths about retail lighting upgrades. Many professionals in the retail business understand that lighting can influence customers' purchasing decisions by affecting the indoor environment and display of your product. Energy efficiency may not seem to be compatible with your goals of presenting your product in the most favorable surroundings. However, some of today's leading technologies can now help your business not only take advantage of top-of-the-line lighting quality, but also save money on operating costs.

**MYTH 1:**  
**There are no high-quality, energy-efficient upgrades for directional incandescent spot lighting.**

Standard incandescent R (Reflector) and PAR (Parabolic Aluminized Reflector) lamps have been used for display and spot lighting because they are a point source and their light beam can be easily controlled and directed where

needed. Many of these standard incandescent R and PAR lamps can be replaced with more efficient halogen PAR lamps. There are also halogen infrared (HIR) PAR lamps that are even more efficacious than standard halogen PAR lamps. In addition to the energy savings, these higher efficiency lamps will produce less heat, which can save on air-conditioning costs and improve the comfort of the space. Also, remember that many of the common incandescent R and PAR lamps are no longer manufactured by the National Energy Policy Act of 1992. Refer to the table below for a list of common lamp types that were outlawed. For a complete listing of lamps that have been outlawed call the ENERGY STAR Hotline at 1-888-STAR-YES (1-888-782-7937), or contact your local lighting distributor.

**MYTH 2:**  
**For a high-volume department store there are no energy-efficient light sources that will provide high light levels.**

Many high-volume department stores have used eight-foot T12

high-output (HO) or very high-output (VHO) lamps to provide high light levels. Proper selection of a T8 electronically ballasted system with the right ballast factor will produce the same amount of light as a T12 HO system. Specular reflectors can also be added to boost the light output. In addition to the energy savings, T8 lamps produce a higher color rendering which will make the merchandise appear more natural and colorful. Furthermore, T8 lamps only lose 10 percent of their light output during their life, HO and VHO systems can lose 25 percent or more. A lower degree of lamp lumen depreciation means more consistent light levels over the life of the system. VHO systems can be replaced with metal halide lamp systems to provide the same light levels and cut energy use by a third. Refer to the table below for some upgrade options. Note the various ballast factors (BF) specified to provide the needed light levels.

**MYTH 3:**  
**Compact fluorescent lamps can not replace incandescent or halogen lamps because they do not provide a "warm glow" like incandescents.**

Most people think fluorescent lamps provide poor lighting quality because they are accustomed to the low color quality fluorescents of yesterday that would produce a cool-blue 'fluorescent' color. Due to

*continued on page 13*

Major Non-Complying Lamps	Watts	Energy-efficient Substitute*	Watts
75R30	75	60PAR/HIR	60
75PAR38	75	50PAR/HIR	50
100PAR38	100	90PAR38/HAL	90
150PAR38	150	100PAR/HIR	100

\*energy-efficient substitute for comparable light output



OMB # 2060-0255 Exp. 4/30/99

Send to: Green Lights, US-EPA 6202J, 401 M St. SW, Washington DC 20460, or FAX to (202)565-2083. For questions, call our technical hotline, toll-free: 1-888-STAR-YES (1-888-782-7937).

# GREEN LIGHTS IMPLEMENTATION REPORT CODES

POLLUTION PREVENTION			
You may want to include the pollution prevention of this project for your own use. Use the following formulas and factors:			
CO2	kWh/yr	x	emission = kWh/yr
SO2	kWh/yr	x	emission = kWh/yr
NOx	kWh/yr	x	emission = kWh/yr
<p><b>EPA Regional Emission Factors (see note below)</b></p> <p><b>REGION 1: CT, MA, ME, NH, RI, VT</b></p> <p>Baseline per CO2 802 NOx</p> <p>kWh saved 1.1 4.0 1.4</p> <p><b>REGION 2: NJ, NY, PA, VA</b></p> <p>Baseline per CO2 802 NOx</p> <p>kWh saved 1.1 3.4 1.3</p> <p><b>REGION 3: DC, DE, MD, PA, VA, WV</b></p> <p>Baseline per CO2 802 NOx</p> <p>kWh saved 1.6 8.2 2.5</p> <p><b>REGION 4: AL, FL, GA, KY, MA, NC, SC, TN</b></p> <p>Baseline per CO2 802 NOx</p> <p>kWh saved 1.5 6.9 2.5</p> <p><b>REGION 5: IL, IN, MI, MN, OH, WI</b></p> <p>Baseline per CO2 802 NOx</p> <p>kWh saved 1.8 10.4 3.1</p> <p><b>REGION 6: AR, LA, MO, OK, TX</b></p> <p>Baseline per CO2 802 NOx</p> <p>kWh saved 1.7 1.2 2.5</p> <p><b>REGION 7: IA, KS, MO, NE</b></p> <p>Baseline per CO2 802 NOx</p> <p>kWh saved 2.0 3.5 3.9</p> <p><b>REGION 8: CO, MT, ND, SD, UT, WY</b></p> <p>Baseline per CO2 802 NOx</p> <p>kWh saved 2.2 3.3 3.2</p> <p><b>REGION 9: AZ, CA, HI, NV, OR, WA</b></p> <p>Baseline per CO2 802 NOx</p> <p>kWh saved 1.0 1.1 1.5</p> <p><b>REGION 10: AK, ID, OR, WA</b></p> <p>Baseline per CO2 802 NOx</p> <p>kWh saved 0.1 0.5 0.3</p>			

Note: State pollution emission factors are aggregated by EPA region. Factors for U.S. territories are national average emission factors. See the Green Lights Lighting Upgrade Manual.

Facility Type	Survey/Analysis by	Equipment Provided by	Installation by	Funding by
1000 Office	2005 **Green Lights Surveyor Ally	2105 **Green Lights Surveyor Ally	2205 **Green Lights Surveyor Ally	2037 **Green Lights Distributor Ally
1001 Warehouse	2006 **Green Lights Distributor Ally	2106 **Green Lights Distributor Ally	2206 **Green Lights Distributor Ally	2038 **Green Lights Utility Ally
1002 Industrial/Manufacturing	2007 **Green Lights Manufacturer Ally	2107 **Green Lights Manufacturer Ally	2207 **Green Lights Manufacturer Ally	2039 **Green Lights Lighting Management Company Ally
1003 Retail sales	2008 **Green Lights Utility Ally	2108 **Green Lights Utility Ally	2208 **Green Lights Utility Ally	2040 internal funds
1004 Health Care	2009 **Green Lights Lighting Management Company Ally	2109 **Green Lights Lighting Management Company Ally	2209 **Green Lights Lighting Management Company Ally	2041 external loan
1005 Lodging (hotels, dormitories, etc.)	2010 in-house personnel	2110 lighting equipment supplier	2210 in-house staff	2042 utility
1006 Assembly (factories, refineries, etc.)	2012 electrical contractor	2111 contractor	2211 contractor	2043 loan/lease-purchase
1007 Education (classrooms)	2013 utility representative	2112 contractor	2212 utility	2044 shared savings
1008 Food sales and service	2015 lighting management company	2113 other	2213 other	2045 other
1009 Parking Garages	2024 Electrical Distributor			
1010 Laboratory	2025 other			
1011 Outdoor				
<p><b>Ballast Type</b></p> <p>80 Fluorescent-cold standard magnetic</p> <p>81 Fluorescent-efficient magnetic</p> <p>82 Fluorescent-hybrid/tubeless output</p> <p>83 Fluorescent-standard electronic</p> <p>84 Fluorescent-integrated electronic</p> <p>85 Fluorescent-external output electronic</p> <p>86 Fluorescent-parial output electronic</p> <p>87 Fluorescent-dimming electronic</p> <p>88 Fluorescent-stop dimming electronic</p> <p>89 Fluorescent-HO standard magnetic</p> <p>90 Fluorescent-HO (800ma) electronic</p> <p>91 Fluorescent-VERO standard magnetic</p> <p>92 Fluorescent-compact magnetic</p> <p>93 Fluorescent-compact electronic</p> <p>94 HID-compact</p> <p>95 HID-electronic</p> <p>96 Fluorescent-HO efficient magnetic</p> <p>97 Fluorescent-VERO efficient magnetic</p> <p><b>Control Type</b></p> <p>100 Manual switching</p> <p>101 Manual dimming</p> <p>102 Occupancy sensor</p> <p>103 Triac switching</p> <p>104 Triac dimming</p> <p>105 Daylight retarding</p> <p>106 Daylight dimming</p> <p>107 Triac level dimming</p> <p>108 Triac level dimming</p> <p>109 Power reduce</p>				
<p><b>Fixture Type</b></p> <p>13 Fluorescent-commercial- no lens</p> <p>14 Fluorescent-commercial-clear lens</p> <p>15 Fluorescent-commercial-translucent lens</p> <p>16 Fluorescent-deep well luminaire</p> <p>17 Fluorescent-small well luminaire</p> <p>18 Fluorescent-industrial-cyan fixture</p> <p>19 Fluorescent-industrial-red/cool fixture</p> <p>36 Bulk sign-indoor</p> <p>37 Bulk sign-outdoor</p> <p>38 Bulk sign-LED</p> <p>39 Bulk sign-electroluminescent</p> <p>40 Bulk sign-trim</p> <p>41 Bulk sign-luminaire</p> <p>43 Incandescent - my</p> <p>44 Compact Fluorescent</p> <p>45 HID-indoor - my</p> <p>46 HID-outdoor - my</p>				
<p><b>Upgrade Type</b></p> <p>110 Replace only</p> <p>111 Replace only</p> <p>112 Replace and reballast</p> <p>113 Spreader reflector/dimless</p> <p>114 Reflector/dimless</p> <p>115 New Low/Reflector/Reballast</p> <p>116 New Low/Reflector</p> <p>117 New fixture</p> <p>118 Current fixture, in Fluorescent or HID</p> <p>119 Track Lighting</p> <p><b>Lamp Type</b></p> <p>54 T-4</p> <p>55 T-10</p> <p>56 T-12 Energy Saving</p> <p>57 T-12 Compact end-on</p> <p>58 T-12 High Lumen</p> <p>59 T-12 Standard</p>				

\*\* A Green Lights Ally is a lighting industry participant in the Green Lights program.

Note: State pollution emissions factors are aggregated by EPA region. Factors for U.S. territories are national average emission factors. See the Green Lights Lighting Upgrade Manual.

\*\* A Green Lighter Ally is a lighting industry participant in the Green Lights program.

# ENERGY STAR® Buildings (ESB) Annual Facility Report Version 1.3, July 3, 1997

OMB #2060-0847 Exp. 4/30/99

Facility Name: \_\_\_\_\_  
Facility Address: \_\_\_\_\_  
City, State, Zip: \_\_\_\_\_  
Facility Square Footage: \_\_\_\_\_

Have you previously submitted a Green Lights Report Form for this facility? Yes \_\_\_ No \_\_\_ Don't Know \_\_\_  
Is this facility your Pilot Building? Yes \_\_\_ No \_\_\_  
For the Energy Star Buildings Program, will you upgrade ONLY the lighting in this facility? Yes \_\_\_ No \_\_\_  
Is this facility new construction? Yes \_\_\_ No \_\_\_

Partner Name: \_\_\_\_\_  
Facility Name: \_\_\_\_\_  
Facility Street Address: \_\_\_\_\_  
City, State, Zip: \_\_\_\_\_  
Facility Square Footage: \_\_\_\_\_

Year: 19\_\_ 19\_\_ 19\_\_

Electricity (kWh) \_\_\_\_\_  
Electricity Costs (\$) \_\_\_\_\_  
Natural Gas (thru one): ocl, nat, thermo \_\_\_\_\_  
Natural Gas Costs (\$) \_\_\_\_\_  
Fuel Oil (gallons) \_\_\_\_\_  
Fuel Oil Costs (\$) \_\_\_\_\_  
Purchased steam/hot water (mmBtu) \_\_\_\_\_  
Purchased steam/hot water costs (\$) \_\_\_\_\_

Electricity (kWh) \_\_\_\_\_  
Electricity Costs (\$) \_\_\_\_\_  
Natural Gas (thru one): ocl, nat, thermo \_\_\_\_\_  
Natural Gas Costs (\$) \_\_\_\_\_  
Fuel Oil (gallons) \_\_\_\_\_  
Fuel Oil Costs (\$) \_\_\_\_\_  
Purchased steam/hot water (mmBtu) \_\_\_\_\_  
Purchased steam/hot water costs (\$) \_\_\_\_\_

Operating Hours \_\_\_\_\_  
Floor Area \_\_\_\_\_  
# of Occupants \_\_\_\_\_  
Plug Loads \_\_\_\_\_  
Outside Air \_\_\_\_\_

Operating Hours \_\_\_\_\_  
Floor Area \_\_\_\_\_  
# of Occupants \_\_\_\_\_  
Plug Loads \_\_\_\_\_  
Outside Air \_\_\_\_\_

Operating Hours \_\_\_\_\_  
Floor Area \_\_\_\_\_  
# of Occupants \_\_\_\_\_  
Plug Loads \_\_\_\_\_  
Outside Air \_\_\_\_\_

Stage 1) Green Lights \_\_\_\_\_  
Stage 2) Turn-Up \_\_\_\_\_  
Stage 3) Load Reduction \_\_\_\_\_  
Stage 4) Fan System \_\_\_\_\_  
Stage 5) Heating/Cooling \_\_\_\_\_  
Write "N/A" for not profitable if RIR < 20%

Stage 1) Green Lights \_\_\_\_\_  
Stage 2) Turn-Up \_\_\_\_\_  
Stage 3) Load Reduction \_\_\_\_\_  
Stage 4) Fan System \_\_\_\_\_  
Stage 5) Heating/Cooling \_\_\_\_\_  
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Stage 1) Green Lights \_\_\_\_\_  
Stage 2) Turn-Up \_\_\_\_\_  
Stage 3) Load Reduction \_\_\_\_\_  
Stage 4) Fan System \_\_\_\_\_  
Stage 5) Heating/Cooling \_\_\_\_\_  
Write "N/A" for not profitable if RIR < 20%

Office \_\_\_\_\_  
Warehouse & Storage \_\_\_\_\_  
Merchandise & Service \_\_\_\_\_  
Lodging \_\_\_\_\_  
Education \_\_\_\_\_  
Public Order & Safety \_\_\_\_\_  
Manufacturing \_\_\_\_\_  
Other (describe): \_\_\_\_\_

Office \_\_\_\_\_  
Warehouse & Storage \_\_\_\_\_  
Merchandise & Service \_\_\_\_\_  
Lodging \_\_\_\_\_  
Education \_\_\_\_\_  
Public Order & Safety \_\_\_\_\_  
Manufacturing \_\_\_\_\_  
Other (describe): \_\_\_\_\_

Office \_\_\_\_\_  
Warehouse & Storage \_\_\_\_\_  
Merchandise & Service \_\_\_\_\_  
Lodging \_\_\_\_\_  
Education \_\_\_\_\_  
Public Order & Safety \_\_\_\_\_  
Manufacturing \_\_\_\_\_  
Other (describe): \_\_\_\_\_

Costs Before Rebates Since Last Report(\$): \_\_\_\_\_  
Rebate/Gains Since Last Report(\$): \_\_\_\_\_  
Was a performance contract used? Yes \_\_\_ No \_\_\_ Unsure \_\_\_

Costs Before Rebates Since Last Report(\$): \_\_\_\_\_  
Rebate/Gains Since Last Report(\$): \_\_\_\_\_  
Was a performance contract used? Yes \_\_\_ No \_\_\_ Unsure \_\_\_

Costs Before Rebates Since Last Report(\$): \_\_\_\_\_  
Rebate/Gains Since Last Report(\$): \_\_\_\_\_  
Was a performance contract used? Yes \_\_\_ No \_\_\_ Unsure \_\_\_

Start date for ESB work in this facility \_\_\_\_\_  
Are ESB upgrades complete? Yes \_\_\_ No \_\_\_  
Date ESB work ended in this facility \_\_\_\_\_  
Today's Date: \_\_\_\_\_

Start date for ESB work in this facility \_\_\_\_\_  
Are ESB upgrades complete? Yes \_\_\_ No \_\_\_  
Date ESB work ended in this facility \_\_\_\_\_  
Today's Date: \_\_\_\_\_

Start date for ESB work in this facility \_\_\_\_\_  
Are ESB upgrades complete? Yes \_\_\_ No \_\_\_  
Date ESB work ended in this facility \_\_\_\_\_  
Today's Date: \_\_\_\_\_

Please include any explanatory comments about this report on a separate page. When completing the form, it is recommended you follow the instructions on the back of this page.  
Send to: ENERGY STAR Buildings, US-EPA #2060, 401 M St. SW, Washington, DC 20460 or fax to (202) 566-5255. For more information, call toll-free 1-888-762-7637. #20200

Please include any explanatory comments about this report on a separate page. When completing the form, it is recommended you follow the instructions on the back of this page.  
Send to: ENERGY STAR Buildings, US-EPA #2060, 401 M St. SW, Washington, DC 20460 or fax to (202) 566-5255. For more information, call toll-free 1-888-762-7637. #20200

Please include any explanatory comments about this report on a separate page. When completing the form, it is recommended you follow the instructions on the back of this page.  
Send to: ENERGY STAR Buildings, US-EPA #2060, 401 M St. SW, Washington, DC 20460 or fax to (202) 566-5255. For more information, call toll-free 1-888-762-7637. #20200

# Instructions for Completing the ENERGY STAR® Buildings Annual Facility Report

**6/27/97**

Please submit baseline data for each facility as soon as possible after joining. In addition, submit one report with "current year" data for each participating facility each year. You should submit this report even if you have not done any projects.

1. General Information

*Previously Submitted Green Lights® Reports.* To assist EPA in accurately tracking your information, indicate whether you have submitted a Green Lights Report Form for this facility at any time in the past.

*Pilot Building.* Each Partner and Ally is required to perform a pilot upgrade within the first two years of program tenure.

*Type of Upgrade.* Indicate whether this facility will undergo a lighting upgrade ONLY. Partners are required to perform whole-building upgrades on 50% of their eligible square footage, and just Green Lights upgrades on an additional 40% of their eligible square footage.

*New Construction.* Are you reporting on a building that is newly constructed? If so, enter a "Y" in the New Construction box.

2. Facility Type

Please check only one facility type. If this facility has multiple uses, check the principal use. (Use a separate page for comments if necessary.)

3. Upgrade Cost Information

Line 1: Enter the amount spent on ENERGY STAR Buildings (ESB) upgrades in this facility since the last report for this facility was submitted.

Line 2: Enter the value of all rebates received for work in this facility since the last report for this facility was submitted.

4. Annual Energy Use and Costs, and Baseline Data

In the current year area, simply enter the information found on your utility bill for the most recent completed year. By year, we mean your organization's fiscal year. It is important that you use the same definition of a year each time you report and that each year covers 12 contiguous months. In the baseline section, enter data covering the three years prior to your joining the ESB program. We encourage you to submit baseline data for each facility as soon as possible after joining. Once you have submitted the baseline for a building, you do not need to include it in future reports for that facility. For example, if you joined the program in 1996, you should submit baseline data for 1993-95 as soon as you can. Then, when 1996 ends you should submit "current year" data for 1996. You should continue to submit "current year" data (once per year) for each facility until your seven years in the program have elapsed.

5. Stages Complete

Enter a percentage complete for each stage, and indicate whether you have finished each stage. For example, suppose you upgraded 50% of this facility's fan system and no additional profitable upgrades of the system were possible. Under stage 4 you would write "50%" complete and "Y" to show this stage is done because no more profitable upgrades are possible. If an entire stage is not profitable, write "NP" on the line with the % after it to indicate "not profitable." Profitable upgrades are defined as having an Internal Rate of Return (IRR) of 20% or greater.

6. Changes Relative to Baseline Years

Enter your best estimate of changes you have experienced in each category since implementing your upgrades. A significant increase in any of these categories can help explain an energy use pattern that is rising despite efficiency upgrades.

7. Additional Information

Please print your name and enter a phone number where EPA may contact you if there are questions regarding your report.

*Start date for ESB work in this facility.* Please enter the date ANY ENERGY STAR Buildings upgrades began in the facility. Even if the work began several years ago, please enter that date, including the year. (An estimate is fine.)

*Are ESB upgrades complete?* Please enter a "Y" if you believe that no more ENERGY STAR Buildings work will be done in this facility.

*Date ESB work ended in this facility.* If you have completed all the work that will be done in this building (that is associated with the program), please enter the date the work ended. (An estimate is fine.)

Comments

If necessary, please attach an additional page with any explanatory comments about the report.

**NEW PROGRAM OPPORTUNITIES**

## ENERGY STAR® Building Label: Recognizing Energy-Efficient Buildings

Is my building more energy-efficient or truly energy-efficient?

As you have begun to complete whole-building upgrades as part of the ENERGY STAR Buildings Five Stage Strategy, you may have considered this question at one time or another. To answer it, one must first understand the difference between being more energy-efficient versus being truly energy-efficient. Both will reduce energy consumption, increase profits, improve comfort, and prevent pollution. However, a truly energy-efficient building will also result in a low level of energy consumption relative to other buildings of similar size, space use, occupancy, and operating hours in a similar climate. It is with this understanding that the ENERGY STAR Building Label will be introduced in Spring 1998, to promote the

use of energy-efficient building performance targets, and to recognize those buildings that meet them.

Presently, approximately 20 different products as diverse as office equipment, exit signs, homes, and HVAC equipment are identified by the ENERGY STAR Label. Building owners have come to ask for and buy products with the ENERGY STAR Label because they have made the connection between energy-efficiency, the environment, and their bottom lines. Beginning in mid-1998, commercial building owners of both existing buildings and those in design will be able to apply for the ENERGY STAR Label. Consistent with other ENERGY STAR labeling efforts, the ENERGY STAR Building Label will be voluntary, market-driven, and performance-based.

To date, the only meaningful way of assessing building performance has been to compare current building energy consumption against prior building energy consumption. Using such comparisons, ENERGY STAR Buildings Partners who have completed the Five Stage Strategy have seen average reductions in their annual energy bills of 30 percent or more. Starting soon, building owners will be further able to benchmark their building against an objective energy-efficient performance target—and be labeled as an ENERGY STAR Building for meeting it.

By adopting and completing the Five Stage Strategy, ENERGY STAR Buildings Partners will be well positioned to obtain the ENERGY STAR Building Label as recognition for owning and operating an energy-efficient building. Similarly, Partners who are in the process of designing new buildings will be able to direct their design and construction contractors to meet the energy consumption targets of the ENERGY STAR Building Label, and thus capitalize on the benefits of energy efficiency by “building in” performance from the outset.

Look for more information regarding the ENERGY STAR Building Label in upcoming issues of the ENERGY STAR Buildings & Green Lights *Update*. ■

*continued from page 8*

advancements in fluorescent technology, compact fluorescent lamps now come in a variety of color temperatures. Specify a compact fluorescent with a color temperature of 2700K or 3000K to match the warm glow of incandescent or halogen lamps. In addition to matching the color temperature of incandescents, compact fluorescent lamps provide high color rendering which allow colors to appear natural.

For more information refer to the Lighting Technologies section of the *Green Lights Lighting Upgrade Manual*. Or, call the ENERGY STAR Hotline at 1-888-STAR-YES (1-888-782-7937). ■

### Existing

F96T12 EE Mag. (2-lamps) 158W

F96T12/HO EE Mag. (2-lamps) 237W

F96T12/VHO EE Mag. (2-lamps) 440W

Assumes: 62 CRIT12 lamps, 85 CRIT8 lamps

### Upgrade (for similar light output)

F32T8 IS Electronic (4-lamps) 116W

F32T8 IS Electronic (BF=1.15)(4-lamps) 152W

F96T8/HO Electronic (BF=.88)(2-lamps) 160W

F96T8 Electronic (BF=1.19)(2-lamps) 155W

250W Metal Halide 293W

## UPGRADE T OOLS

# E SOURCE Technology Atlas Series Now Available to ENERGY STAR® Buildings Partners

As part of EPA's ongoing effort to provide ENERGY STAR® Buildings Partners with the most complete and up-to-date technical information regarding energy-efficiency upgrades, Partners can take advantage of one of the most comprehensive energy-efficiency resources available—the E SOURCE Technology Atlas Series.

The E SOURCE Technology Atlas Series is a five-volume compendium of energy-efficiency products and practices that complements the ENERGY STAR Buildings Upgrade Manual. Focusing on both the design and operation of energy systems in buildings, it will be an invaluable technical resource to ENERGY STAR® Buildings Partners in planning and implementing energy-efficiency upgrades.

The E SOURCE Technology Atlas Series is divided into five volumes which will be helpful in implementing the ENERGY STAR Buildings Strategy:

- Volume I: Lighting
- Volume II: Cooling
- Volume III: Heating
- Volume IV: Drivepower
- Volume V: Appliances

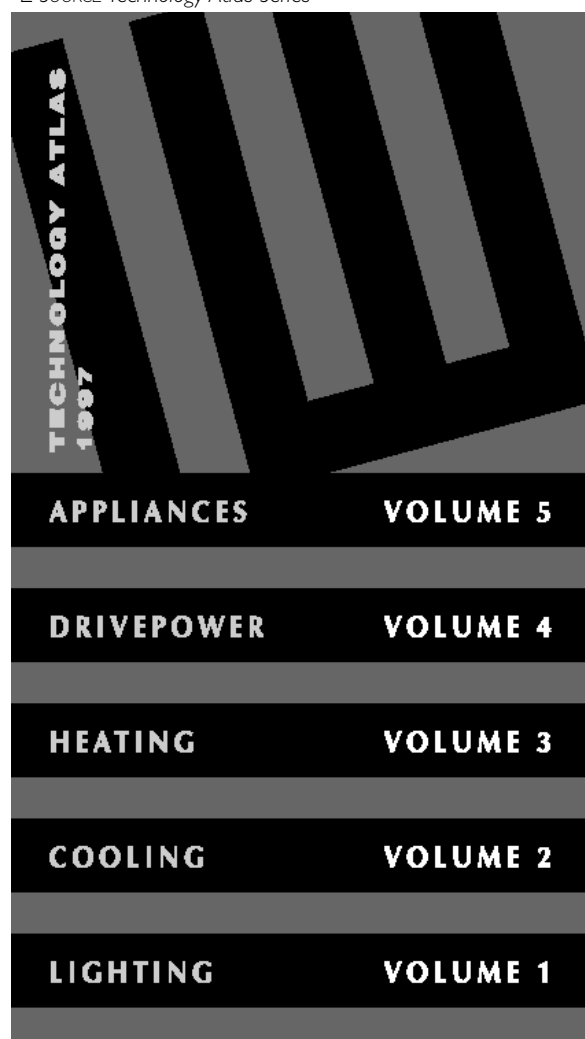
Each volume provides the latest objective information on products and applications; product comparisons, including charts and tables to simplify product selection and design choices; integrated design approaches, stressing the opportunities inherent to a whole-system approach; and case studies, highlighting the real-world experiences of designers and building managers with energy-efficient technologies

and strategies. In addition, the E SOURCE Technology Atlas Series provides detailed technical references to help ENERGY STAR Buildings Partners make the educated choices necessary for a successful energy-efficiency upgrade. Each volume is updated every two years, and is available in both print and CD-ROM versions.

ENERGY STAR Buildings is now providing the E SOURCE Tech-

nology Atlas Series at no cost to all ENERGY STAR Buildings Partners and Allies. To obtain this valuable resource, ENERGY STAR Buildings Partners or Allies should contact their account manager, or call the ENERGY STAR Hotline at 1-888-STAR-YES (1-888-782-7937). To find out more about the E SOURCE Technology Atlas Series, visit the E SOURCE web site at <http://www.esource.com/atlas>.

*E SOURCE Technology Atlas Series*



**ALLY CORNER**

## Allies Are Building Business With ENERGY STAR Buildings

Allies, watch for Building Business, the new ENERGY STAR Buildings workshop, early in the year. Find out how EPA's integrated whole-building energy-efficiency strategy can help you market your own products and services. This workshop is designed specifically to meet the needs of ENERGY STAR Buildings Allies, including tips on how to overcome barriers to energy-efficiency in the marketplace, incorporating the ENERGY

STAR Buildings message into your marketing strategy, applying consultative marketing techniques, using the tools available from EPA, and supporting your customers throughout the upgrade process. The one-day workshop emphasizes whole-building upgrades, discusses opportunities in a changing electric industry marketplace and developing alliances with other firms to present a comprehensive package of upgrades to your customers.

This workshop is the second in a series of ENERGY STAR Buildings workshops. The first workshop, Building Momentum, helps partners incorporate the ENERGY STAR Building strategy into an action plan for proceeding with their building upgrades after signing the MOU. Both workshops will be held monthly throughout the year in locations across the country. For more information on the schedule or to register for a workshop, call 1-888-STAR YES. ■

**PARTNERSHIP NEWS**

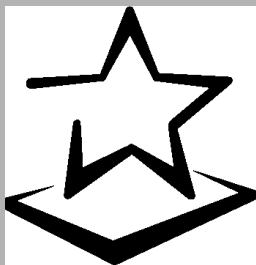
## ENERGY STAR Buildings and Green Lights: One Strategy, One Partnership

The energy to run U.S. commercial and industrial buildings costs about \$110 billion every year. By using cost-effective, low-risk, energy-efficient technologies, U.S. companies could reduce this number by \$25 billion annually. To help U.S. businesses seize this opportunity, Green Lights is now the first step in a building-wide energy-efficiency partnership, ENERGY STAR Buildings and Green Lights. By understanding and monitoring building energy use, increasing energy efficiency, and taking advantage of

system interaction, ENERGY STAR Buildings participants can save over 30 percent on their energy bills while improving occupant comfort. ENERGY STAR Buildings participants benefit from tools designed to help plan and carry out these upgrades as well as unbiased technical information and communications support.

Organizations that have already committed to energy efficient lighting upgrades can leverage these savings by adopting a building-wide upgrade strategy. Green Lights participants can

join ENERGY STAR Buildings by signing an addendum to their current Memorandum of Understanding (MOU) with EPA. In addition to making lighting upgrades, ENERGY STAR Buildings participants agree to upgrade 50 percent of their owned facilities with energy-efficient heating and cooling equipment over a seven-year period, providing the upgrades will result in a 20 percent internal rate of return. For more information, call your account manager, or the ENERGY STAR hotline at 1-888-STAR-YES. ■



### **1998 ENERGY STAR Awards Ceremony**

On Tuesday, March 24, 1998, EPA will once again present the prestigious ENERGY STAR Awards to leaders in energy efficiency. The 1998 ENERGY STAR Awards Ceremony will honor leaders in ENERGY STAR Buildings and Green Lights, ENERGY STAR Homes, ENERGY STAR Transformers, and ENERGY STAR Office Products. The event will be held at the Washington Hilton and Towers in Washington, DC.

For more information, please call the toll-free ENERGY STAR Hotline at 1-888-STAR-YES.

# Online



Information about the ENERGY STAR®  
Buildings and Green Lights®  
Partnership is available online.  
Our addresses are:

**ENERGYSTAR Buildings:** [www.epa.gov/buildings](http://www.epa.gov/buildings)

**Green Lights:** [www.epa.gov/greenlights](http://www.epa.gov/greenlights)

**ENERGYSTAR Program:** [www.epa.gov/energystar](http://www.epa.gov/energystar)

**Update home page:** [www.epa.gov/appdstar/news](http://www.epa.gov/appdstar/news)

# Workshops

## BUILDING KNOW-HOW LIGHTING TECH SESSIONS

*Facility-manager-level workshop focusing on lighting technologies.*

**February 18** **Orlando, FL**

**March 24** **St. Louis, MO**

**March 26** **Raleigh, NC**

## BUILDING MOMENTUM WORKSHOPS

*Non-technical, executive level workshop helping partners  
develop and implement their energy strategies.*

**February 19** **Dallas, TX**

**March 19** **New York, NY**

**April 16** **Chicago, IL**

**April 30** **Los Angeles, CA**

To register, or for more information, please call  
the Hotline at 888-STAR-YES (888-782-7937).



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Washington, DC 20460

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